

Appl. No. 10/774,325
Reply to Office Action of May 2, 2007

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IN THE CLAIMS

This listing of claims replaces all prior versions and listings of the claims in this application:

1. (Currently Amended) A method for producing protein-coated polystyrene microparticles consisting of the steps of:
 - (a) combining a suspension of uncoated polystyrene microparticles with a protein to form a combination, the protein being a partner of a bioaffinity binding pair and having a size from 10 nm to 300 nm as determined by photon correlation spectroscopy,
 - (b) coating the protein onto the microparticles by adsorption ~~under alkaline conditions~~, wherein said coating step is conducted for a period of 1 to 10 days at a pH selected from a range of about 10.5 to about 12.5, and
 - (c) separating the non-adsorbed protein from the protein-coated microparticles.
2. (Previously Presented) The method of claim 1, wherein the protein is a polymerized protein.
3. (Previously Presented) The method of claim 1, wherein the protein is a streptavidin which has been polymerized by chemical treatment.
4. (Cancelled)
5. (Original) The method of claim 1, wherein the microparticles have a magnetizable core.
6. (Cancelled)
7. (Cancelled)
8. (Cancelled)

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9. (Currently Amended) The method of claim 5 wherein the microparticles have a size of about 2.8 μm and ~~consist~~consist essentially of about 88% polystyrene and about 12% magnetite.
10. (Cancelled)
11. (Previously Presented) The method of claim 1 wherein said coating step is conducted for a period of 4 to 7 days.
12. (Previously Presented) The method of claim 1 wherein the coating step is conducted at a pH between 11 and 12.
13. (Currently Amended) ~~The~~A method of claim 1 producing protein-coated polystyrene microparticles, said method consisting of the steps of:
- (a) combining a suspension of polystyrene microparticles with a protein to form a combination, the protein being a partner of a bioaffinity binding pair and having a size from 10 nm to 300 nm as determined by photon correlation spectroscopy,
 - (b) wherein said coating step coating the protein onto the polystyrene microparticles by adsorption, wherein said coating step is conducted with using a buffer having a salt content of about 0.3 to about 1.5 M and a pH selected from a range between 10.5 and 12.5, for a period of 1 to 10 days, and
 - (c) separating the non-adsorbed protein from the protein-coated microparticles.
14. (Cancelled)
15. (Currently Amended) A method for producing protein-coated polystyrene microparticles comprising the steps of:
- (a) forming a suspension of uncoated polystyrene microparticles;

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- (b) adding a protein to said suspension to form a combination, wherein the protein is a partner of a bioaffinity binding pair and has a size from 10 nm to 300 nm as determined by photon correlation spectroscopy;
 - (c) adsorbing the protein onto the polystyrene microparticle, wherein the pH of said combination is selected from the range of about ~~10.0~~ 10.5 to about 12.5;
 - (d) incubating the combination for 1 to 10 days in the absence of covalent coupling ~~a crosslinking agent~~; and
 - (e) separating the non-adsorbed protein from the protein-coated polystyrene microparticles.
16. (Currently Amended) The method of claim 15 wherein the length of time of said incubation step is ~~about 4 to about 7 days~~.
17. (Previously Presented) The method of claim 15 wherein said coating step is conducted with a buffer having a salt content of about 0.3 to about 1.5 M.
18. (Currently Amended) The method of claim 16 wherein the microparticles have a size of about 2.8 μ m and ~~consist~~consist essentially of about 88% polystyrene and about 12% magnetite.
19. (Currently Amended) The method of claim 18 wherein said protein is polymerized streptavidin.
20. (Currently Amended) The method of claim 15 wherein said ~~coating~~ incubating step is conducted for a period of 4 to 7 days.